

REMARKS

The Examiner objects to claims 24 and 33 because the term “cooling blood flow through” is awkward and suggests “cooling blood flowing through” as better phrasing. Applicant has amended claims 24 and 33 as suggested by the Examiner.

Claims 24 - 27 are rejected under 35 USC 103 (as being unpatentable over U.S. Patent 4,931,047 to Broadwin et al. in View of U.S. Patent 6,203,540 to Weber. The Examiner contends that “Broadwin et al. teach an apparatus for delivering RF energy and ultrasonic energy to a tissue site (abstract) with a fluid that cools the tip and the blood and tissue particles (Col.3, lines 57-62) Weber teaches an apparatus for delivery of energy to tissue, the energy being ultrasonic energy and laser delivered in pulses (Col.7, lines 40-43). The apparatus includes sensors for determination of tissue temperature (Fig.3,#25).” The Examiner further contends that “It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the temperature sensor and pulsed delivery as taught by Weber in the invention of Broadwin et al. as both are well known in the art of providing improved control of the energy delivery to tissue.”

Applicant has amended Claim 24 and dependent claims 25,26 and 27 to include the limitation of “a drug for moderating the degree of blood flow cooling” as described on page 8, lines 19 and 20 of the specification. Broadwin et al teaches the use of a saline irrigation fluid at the surgical site to cool “ the vibrating tip 22 and the blood, tissue particles and other aspirated material to prevent the tool 20 from being damaged and to slow down the coagulation of the blood” (Col.3, lines 60-63, emphasis added). Applicant respectfully submits that the use of “a drug for moderating the degree blood flow cooling” as stated in amended Claim 24 and new Claim 34 is not obvious in view of the use of saline solution for preventing “ the tool 20 from being damaged

and to slow down the coagulation of the blood” as described in Broadwin et.al..

In amended Claim 25, the drug for moderating the degree of blood flow cooling is limited to Thorazine. Applicant includes a copy of pages 117 and 715 from Merriam-Webster’s Medical Desk Dictionary defining Thorazine as a drug included in a preparation of chlorpromazine used as a tranquilizer to suppress the more flagrant symptoms of disturbed behavior (as in schizophrenia). Applicant submits that the use of Thorazine for moderating the degree of blood flow cooling as stated in amended Claim 25 would not be obvious in view of the use of saline solution as taught by Broadwin et. al. Reconsideration of the rejection and allowance of currently amended Claims 24,25 and dependant Claims 26, 27 is respectfully requested.

Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4, 931, 047 to Broadwin et.al. in view of U.S. Patent 6, 203, 540 to Weber, as applied to Claim 24 above, and further in view of U.S. Patent 6, 506, 189 to Rittman et.al..

Applicant submits that none of the cited prior art patents disclose the limitation in amended Claim 24 and new Claim 34 of “ a drug for moderating the degree of blood flow cooling” and for the reasons discussed above, such limitation would not be obvious to one skilled in the art in view of the cited prior art patents.

Reconsideration of the rejection and allowance of Claims 28-30 is respectfully requested.

Claims 31 and 32 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent 4, 931, 047 to Broadwin et.al. in view of U.S. Patent 6, 203, 540 to Weber as applied to claim 24 above, and further in view of U.S. Patent 5, 891, 134 to Goble et.al..

Applicant submits that none of the cited prior art patents disclose the limitation in amended Claim 24 and new Claim 34 of “a drug for moderating the degree of blood flow cooling” and for the reasons discussed above, such limitation would not be obvious to one skilled in the art in view of the cited prior art patents.

Reconsideration of the rejection and allowance of claims 31 and 32 is respectfully requested.

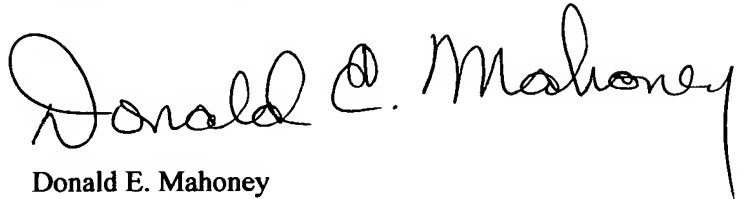
Claim 33 is rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent 6, 203, 540 to Weber in view of U.S. Patent 4, 931, 047 to Broadwin et.al..

Applicant submits that none of the cited prior art patents disclose the limitation in amended Claim 33 and new Claim 34 of “ a drug for moderating the degree of blood flow cooling” and for the reasons discussed above, such limitation would not be obvious to one skilled in the art in view of the cited prior art patents.

Reconsideration of the rejection and allowance of amended Claim 33 and new Claim 34 is respectfully requested.

Respectfully submitted

By

A handwritten signature in black ink that reads "Donald E. Mahoney". The signature is fluid and cursive, with the first name "Donald" being the most prominent part.

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Feb. 21 , 2006

Merriam-Webster's

Medical

Desk

Dictionary

BEST AVAILABLE COPY



MERRIAM-WEBSTER INC., Publishers,
Springfield, Massachusetts, U.S.A.

whole organism
n : a crystalline organic mercuric antiseptic and germicide — see thio-pen-tal

thio-pen-tal \thi-ō-pen-tal, -tōl\ n : a barbiturate compound used as the sodium derivative in intravenous anesthesia and in the treatment of some forms of mental illness — see PENTOTHAL

thio-pen-tone \thi-ō-pen-tōn, -tōn\ n : a barbiturate compound used chiefly in organic synthesis

thio-phos-phate \thi-ō-fos-fāt\ n : a salt or ester of an acid derived from a phosphoric acid by replacement of one or more atoms of oxygen with sulfur

thio-rid-a-zine \thi-ō-rid-ā-zēn, -zān\ n : a phenothiazine tranquilizer used as the hydrochloride $C_{15}H_{12}N_2S \cdot HCl$ for relief of anxiety states and in the treatment of schizophrenia

thio-semi-car-ba-zide \thi-ō-sem-ē-kār-bē-zīd\ n : a crystalline compound CH_3N_3S that is the analogue of semicarbazide in which oxygen is replaced by sulfur

thio-semi-car-ba-zone \thi-ō-sem-ē-kār-bē-zōn\ n : any of a class of compounds analogous to semicarbazones and formed by the addition of thiosemicarbazide on an aldehyde or ketone

thio-sin-amine \thi-ō-sin-ā-mēn\ n : ALLYLTHIOUREA or ester of thiosulfuric acid

thio-sul-fur-ic or chiefly Brit thio-sul-phur-ic \thi-ō-sul-fūr-ik, -sūl-fūr-ik\ n : an unstable acid H_2SO_3 derived from sulfuric acid by replacement of one oxygen atom by sulfur and known only in solution or in salts and esters

thio-te-pe \thi-ō-tē-pē\ n : a sulfur analogue of terephthalic acid that is used esp. as an antineoplastic agent and also toxic than tepa

thio-thi-ene \thi-ō-thīk-sēn\ n : an antipsychotic drug $C_{12}H_{10}N_2O_2S_2$ used esp. in the treatment of schizophrenia — see NAVANE

thio-urea-cil \thi-ō-yūr-ē-sil\ n : a bitter crystalline compound $C_4H_4N_2OS$ that depresses the function of the thyroid gland

thio-urea \thi-ō-yūr-ē\ n : a colorless bitter crystalline compound $CS(NH_2)_2$ analogous to and resembling urea that is used esp. as a reagent and in medicine as an antithyroid drug — called also thiocarbamide

thio-xan-thene \thi-ō-zan-thēn\ n : a compound $C_{12}H_8S_2$ that is the parent compound of various antipsychotic drugs (as thioxene), also : a derivative of thioxanthene

thi-ram \thi-ī-rām\ n : a compound $C_6H_7N_3S_4$ used as a side chain in the synthesis of penicillin

third cranial nerve n : OCULOMOTOR NERVE

third-degree burn \thi-ō-dī-gre\ n : a burn characterized by destruction of the skin through the depth of the dermis and possibly into underlying tissues, loss of fluid, and sometimes shock

third eyelid n : NICTITATING MEMBRANE

third law of thermodynamics n : LAW OF THERMODYNAMICS 3

zinc dye that is used chiefly as a biological stain

thionyl chloride \thi-ō-jīl\ n : a volatile corrosive liquid compound $SOCl_2$ used chiefly in making acyl chlorides from carboxylic acids

thio-pen-tal \thi-ō-pen-tal, -tōl\ n : a barbiturate compound used as the sodium derivative in intravenous anesthesia and in the treatment of some forms of mental illness — see PENTOTHAL

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third eyelid n : NICTITATING MEMBRANE

knee, and a caliper splint for ambulatory patients.

Thomson's disease \thi-ō-senz\ n : MYOTONIA CONGENITA

Thomson, Asmus Julius Thomas (1815-1896), Danish physician. In 1876 he gave the first full description of a congenital disease marked by tonic spasm of some of the muscles. He himself suffered from this condition which is now known as myotonia congenita or Thomson's disease.

thion-zyl-a-mine \thi-ō-zīl-ā-mēn, -mēn\ n : an antihistaminic drug $C_{16}H_{18}N_2O$ derived from pyrimidine and used in the form of its crystalline hydrochloride — see NEOTHETAMINE

thio-ra-cen-te-sis \thi-ō-rā-sen-tē-sis\ n : a disease of the respiratory tract in which the lungs are inflamed and the blood is aspirated of fluid from the chest (as in empyema) — called also *thoracocentesis*

thoraces pl of THORAX

thor-acic \thi-ō-rās-ik\ adj : of, relating to, located within, or involving, the thorax, (—trauma) <—surgery>

thor-a-cally \thi-ō-rās-ik-ē\ adv

thor-a-cic aorta n : the part of the aorta that lies in the thorax and extends from the arch to the diaphragm

thor-a-cic artery n : 1 : either of two arteries that branch from the axillary artery or from one of its branches : a : a small artery that supplies or sends branches to the lower limbs, the clavicle and the walls of the chest — called also *supreme thoracic artery* b : an artery that often arises from the thoracoacromial artery, or from the subscapular artery rather than the axillary artery and that supplies both pectoralis muscles and the serratus anterior and sends branches to the lymph nodes of the axilla, and to the subscapularis muscle — called also *lateral thoracic artery* 2 : see INTERNAL THORACIC ARTERY

thor-a-cic cage n : RIB CAGE

thor-a-cic cavity n : the division of the body cavity, that lies above the diaphragm, is bounded peripherally by the wall of the chest, and contains the heart and lungs

thor-a-cic duct n : the main trunk of the system of lymphatic vessels that lies along the front of the spinal column, extends from a dilatation behind the aorta and opposite the second lumbar vertebra up through the thorax where it turns to the left and opens into the left subclavian vein, and receives chyle from the intestine and lymph from the abdomen, the lower limbs, and the entire left side of the body — called also *left lymphatic duct*

thor-a-cic ganglion n : any of the ganglia of the sympathetic chain in the thoracic region that occur in 12 or fewer pairs

thor-a-cic nerve n : any of the spinal nerves of the thoracic region that consist of 12 pairs of which one pair emerges just below each thoracic vertebra

thor-a-cic vertebra n : any of the 12 vertebrae dorsal to the thoracic region and characterized by articulation with the ribs — called also *dorsal vertebra*

thor-a-co-ab-dom-i-nal \thi-ō-rā-kō-ab-dām-ē-nāl\ n : also *thor-a-co-ab-dom-i-nal* \thi-ō-rā-kō-ab-dām-ē-nāl\ n : a short branch of the axillary artery that divides into four branches supplying the region of the pectoralis muscles, deltoid, subclavius, and sternoclavicular joint

thor-a-co-cente-sis \thi-ō-rā-kō-sen-tē-sis\ n : pl -teses \-sēz\ n : THORACOCENTESIS

thor-a-co-dor-sal \thi-ō-rā-kō-dōr-sāl\ n : an artery that is continuous with the axillary artery, accompanies the thoracoacromial nerve, and supplies or gives off branches supplying the subscapularis muscle, latissimus dorsi, serratus anterior, and the intercostal muscles

tho-ra-cop-a-gus \thi-ō-rā-kōp-ā-gus\ n : pl -guses or -gus \-jē\ n : Siamese twins joined at the thorax

tho-ra-co-plas-ty \thi-ō-rā-kō-plas-tē\ n : pl -ties \-tēz\ n : surgical operation of removing or resecting one or more ribs so as to obliterate the pleural cavity and collapse a diseased lung

tho-ra-co-scope \thi-ō-rā-kō-skōp\ n : an instrument fitted with a lighting system and telescopic attachment, designed to permit visual inspection within the chest cavity and treatment under visual control, and inserted through a puncture in the chest wall in an intercostal space — *tho-ra-co-scopic* \thi-ō-rā-kō-skōp-ik, -skāp-ik\ adj

tho-ra-cos-co-py \thi-ō-rā-kō-sōs-kōp-ē\ n : pl -pies \-pēz\ n : examination of the chest and esp. the pleural cavity by means of a thoracoscope

tho-ra-cos-to-my \thi-ō-rā-kō-sōs-tō-mē\ n : pl -mies \-mēz\ n : surgical opening of the chest (as for drainage)

tho-ra-cot-o-my \thi-ō-rā-kō-tō-mē\ n : pl -mies \-mēz\ n : surgical incision of the chest wall

tho-rax \thi-ō-rāks, -thi-ō-raks\ n : pl (tho-rāxes or tho-rāces \thi-ō-rā-sēz, -thi-ō-rāsēz\ n : the part of the mammalian body that is situated between the neck and the abdomen and supported by the ribs, costal cartilages, and sternum; also : THORACIC CAVITY 2 : the middle of the three chief divisions of the body of an insect; also : the corresponding part of a crustacean or an arachnid

tho-rax-zine \thi-ō-rāks-zēn\ n : a trademark used for a preparation of chlorpromazine

tho-ri-um \thi-ō-rē-əm\ n : a radioactive metallic element that occurs combined in minerals and is usu. associated with rare earths — symbol Th; see ELEMENT table

thorium emanation n : THORON

thorium oxide n : a refractory crystalline compound obtained usu. as a dense white powder and used esp. formerly as a contrast medium in roentgenography — called also *thorium dioxide*, see THOROTRAST

thorn apple \thi-ō(r)-m\ n : JIMSONWEED; also : any plant of the genus *Datura*

thorn-headed worm or thorny-headed worm \thi-ō(r)-hēd-əd\ n : any worm of the group Acanthocephala

tho-ron \thi-ō(r)-ən, -thi-ō(r)-ēn\ n : a heavy radioactive isotope of radon of mass number 220 that is formed as a decay product of thorium, decays by emission of an alpha particle, and has a half-life of less than a minute — called also *thorium emanation*

tho-ro-trast \thi-ō-rō-trast\ n : a trademark used for a preparation of thorium oxide used as a radiopaque medium

thor-ough-pin \thi-ō-rō-pin, -thi-ō-rā-pin\ n : a synovial dilatation just above the hock of a horse, on both sides of the leg, and slightly anterior to the hamstring tendon that is often associated with lameness

thought \thot\ n : 1 : the action or process of thinking, b : serious consideration, 2 : a : reasoning power, b : the power to imagine, c : something that is thought, as : a : an individual act or product of thinking, b : a developed intention or plan (he had no thought of leaving home), c : something (as an opinion or belief) in the mind (he spoke his thoughts freely), d : an intellectual product or the organized views and principles of a period, place, group, or individual

thread lungworm \thred\ n : a slender widely distributed nematode worm of the genus *Dictyocaulus* (*D. filaria*) that parasitizes the air passages of the lungs of sheep

thread-worm \thred-worm\ n : any long slender nematode worm

thomas splint

whole organism

n : a crystalline organic mercuric antiseptic and germicide — see thio-pen-tal

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